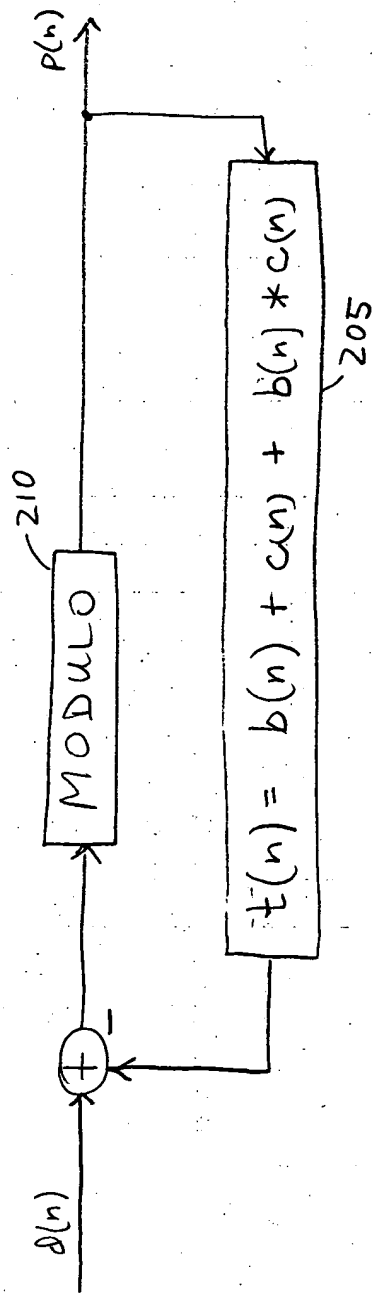


FIG. 1



200

FIG. 2

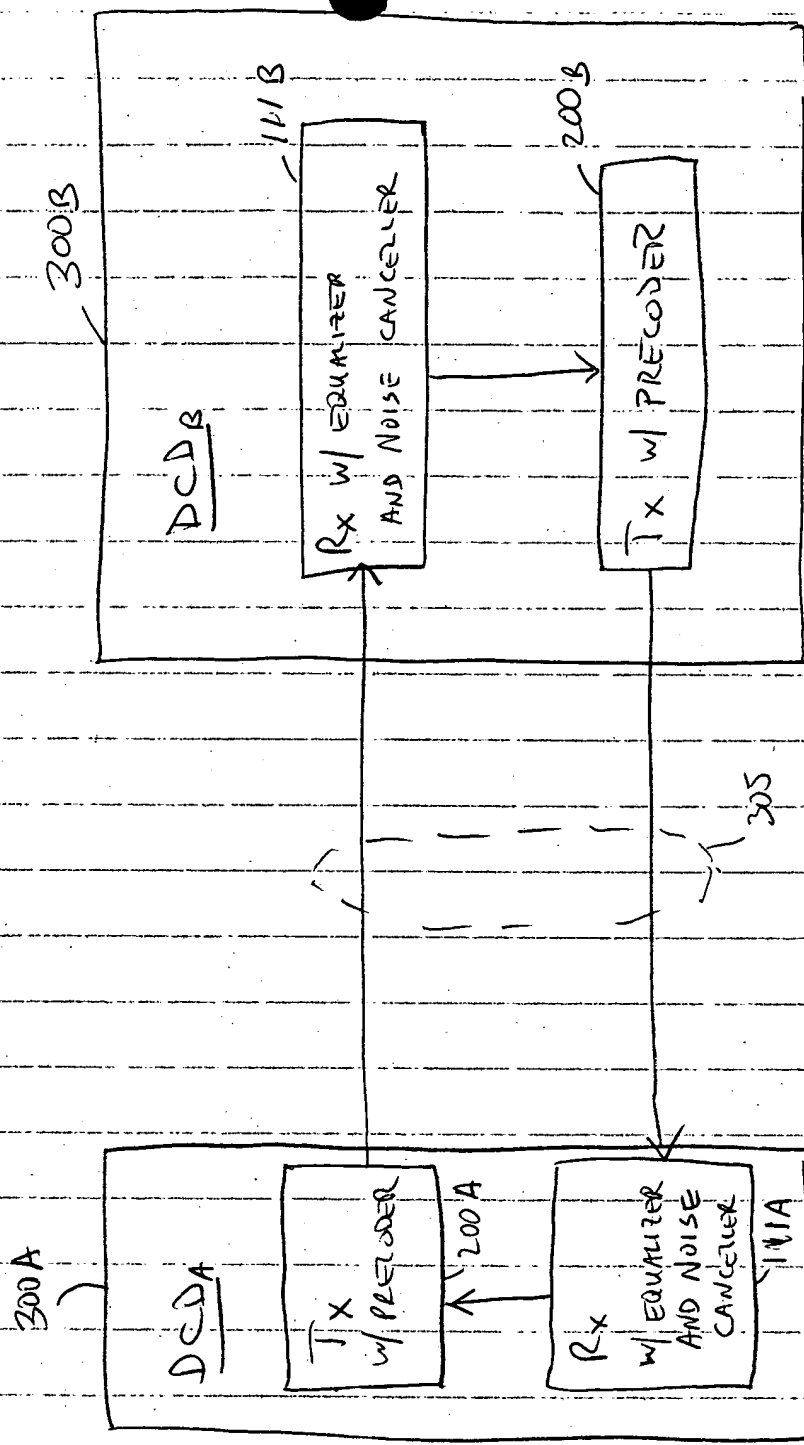


FIG. 3

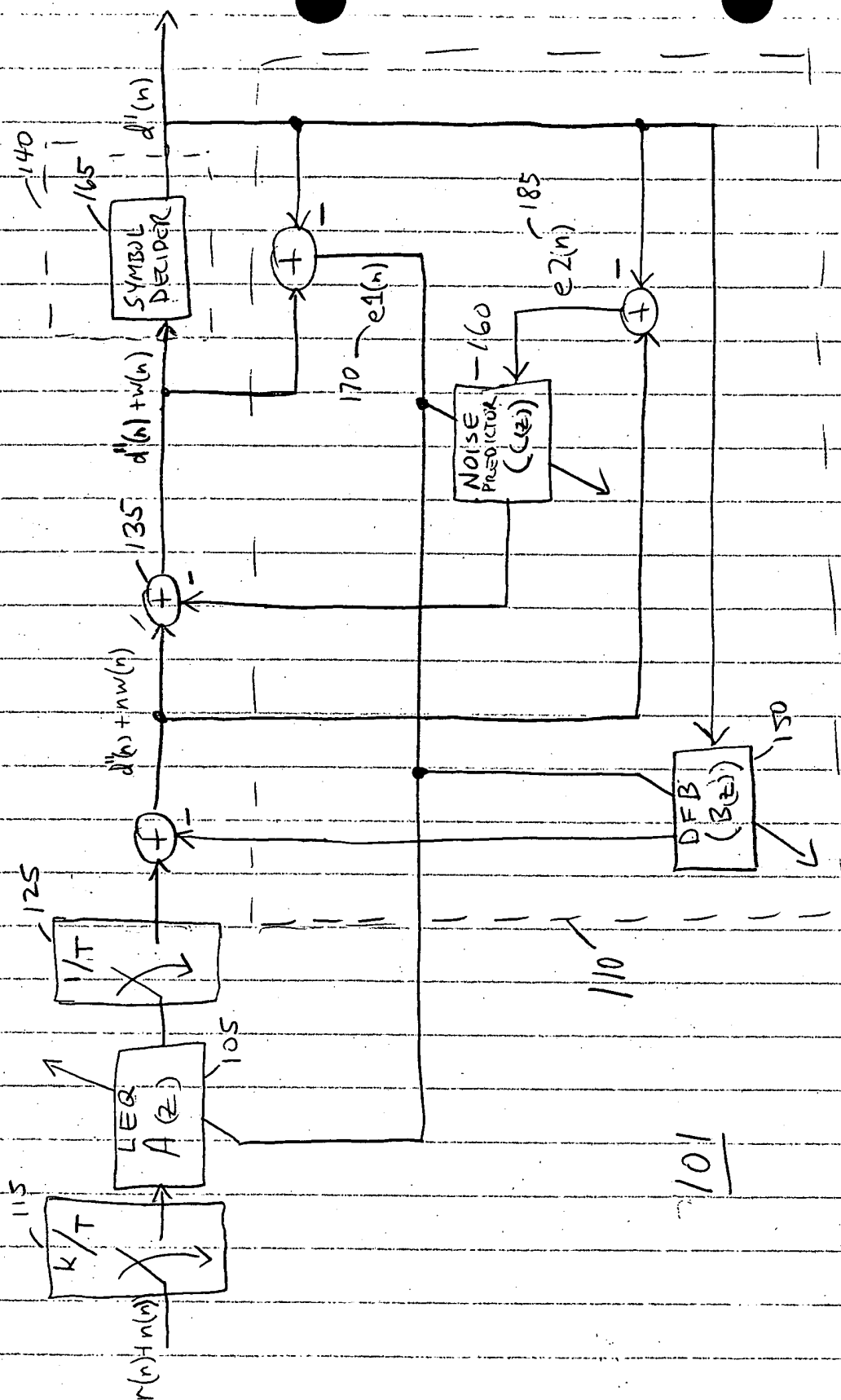
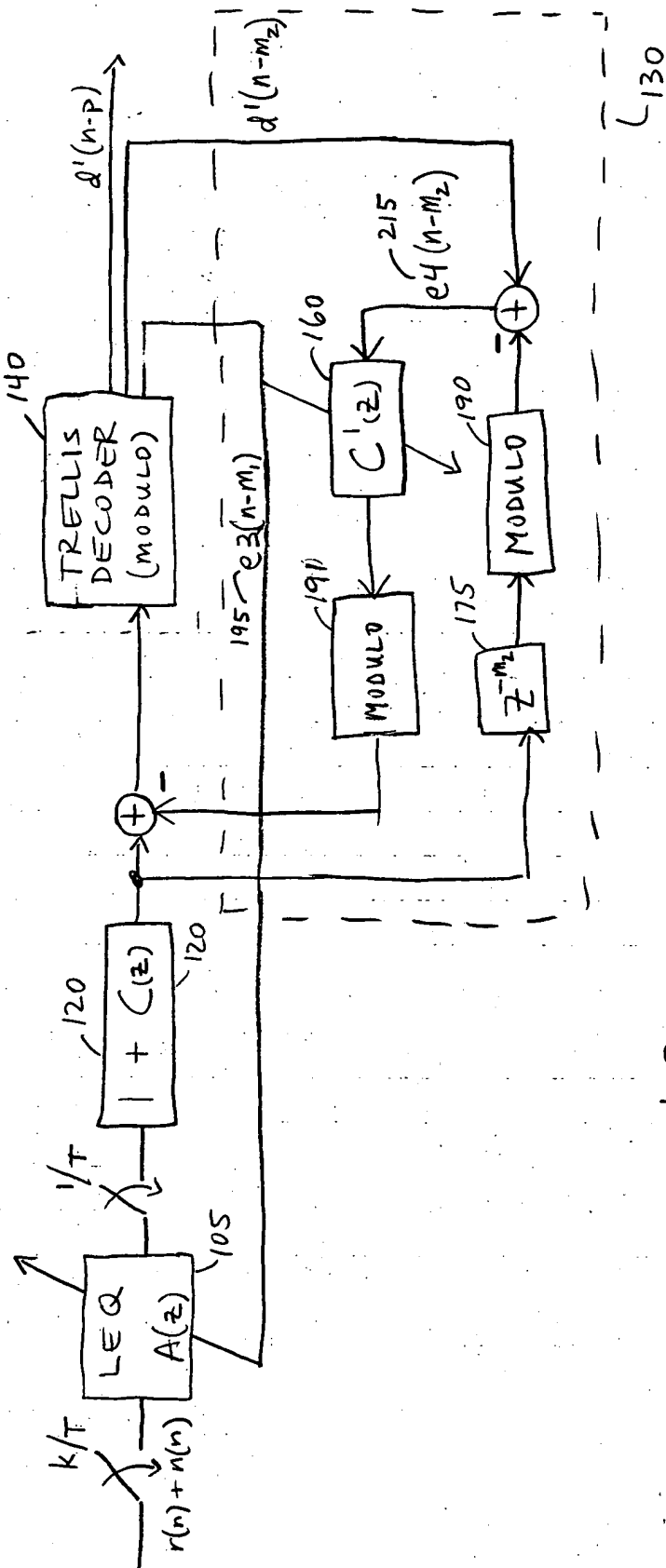


FIG. 4



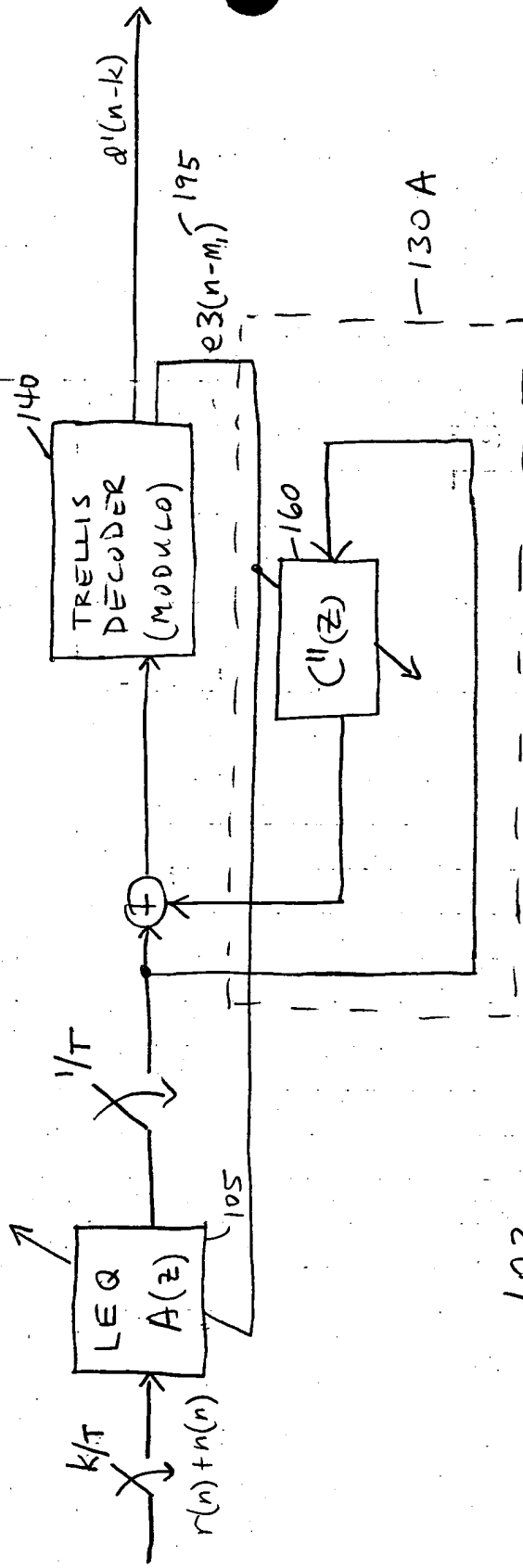


FIG. 6

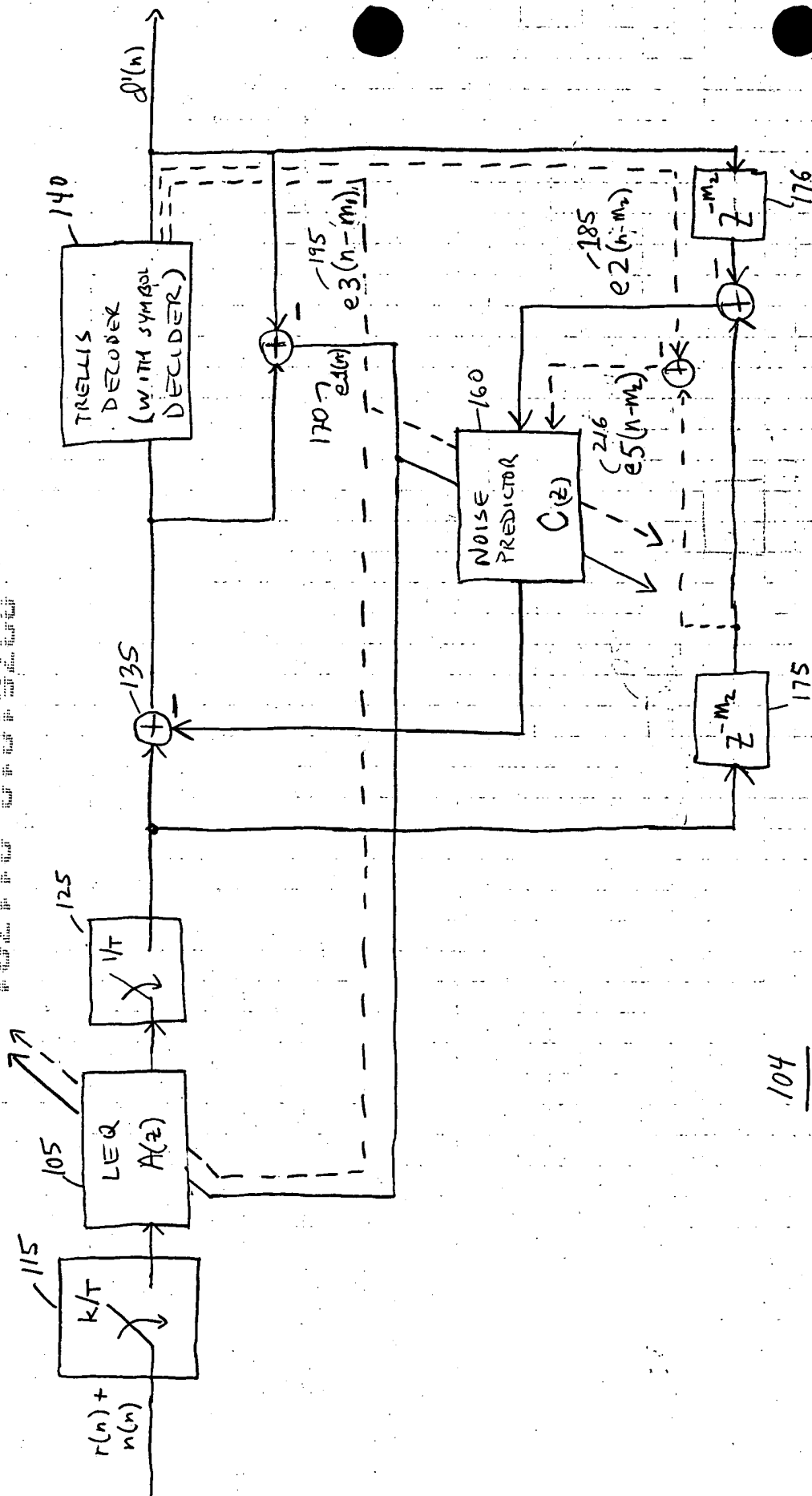


FIG. 7

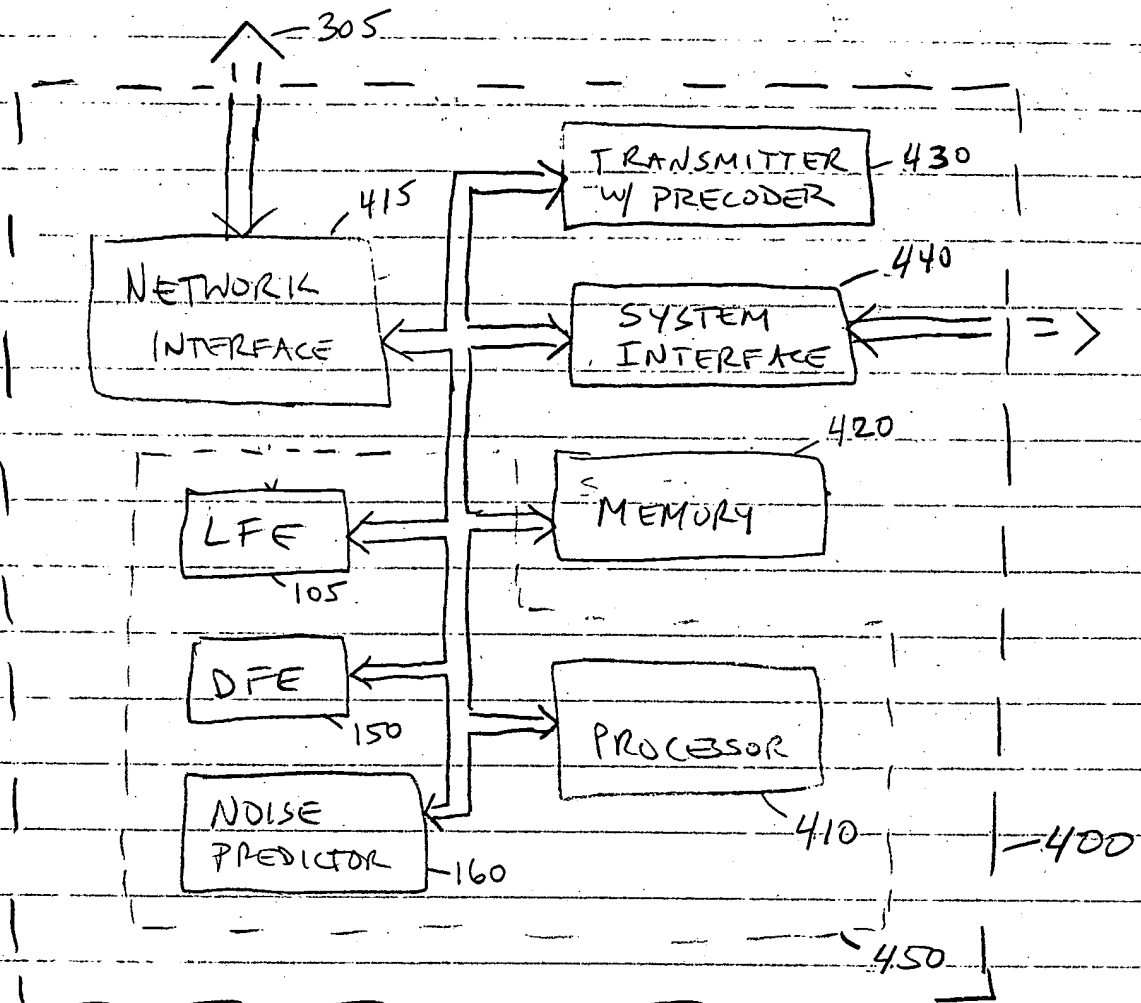


FIG. 8

START: RECEIVE TRAINING SIGNAL HAVING NOISE AND ISI -500

FIG. 9

DETERMINE A PLURALITY OF LINEAR FEEDFORWARD EQUALIZATION COEFFICIENTS $a(n)$, UTILIZING A k/T SAMPLE RATE AND ADAPTING TO A FIRST TRAINING ERROR SIGNAL (FOR PRE-CURSOR EQUALIZATION AND ISI REDUCTION). -505

NO / PRECODING TO BE UTILIZED? / YES -510

DETERMINE A PLURALITY OF DECISION FEEDBACK EQUALIZATION COEFFICIENTS $b(n)$, UTILIZING A $1/T$ SAMPLE RATE, AND ADAPTING TO THE FIRST TRAINING ERROR SIGNAL (FOR POST-CURSOR EQUALIZATION AND ISI REDUCTION). -515

DETERMINE A PLURALITY OF CORRELATED NOISE REDUCTION COEFFICIENTS $c(n)$, UTILIZING A $1/T$ SAMPLE RATE, HAVING AN INPUT OF A SECOND TRAINING ERROR SIGNAL AND ADAPTING TO THE FIRST TRAINING ERROR SIGNAL FOR CORRELATED NOISE REDUCTION. -520

TRAINING PERIOD COMPLETE? NO / YES -525

PRECODING TO BE UTILIZED? NO / YES -530

DETERMINE A PLURALITY OF COEFFICIENTS $t(n)$ FOR PRECODING, WITH $t(n) = b(n) + c(n) + b(n) * c(n)$, AND FOR $BER < 10^{-7}$, RESET COEFFICIENTS $c(n)$ TO ZERO -535

RECEIVE AND TRELLIS DECODE TRANSMITTED DATA -540

DETERMINE AND SELECT A TRELLIS PATH HAVING A SMALLEST CUMULATIVE ERROR -545

DETERMINE A BRANCH ERROR (METRIC), ASSOCIATED WITH A SELECTED PREVIOUS STATE OF THE SELECTED TRELLIS PATH, TO FORM A TRELLIS ERROR SIGNAL. -550

UPDATE LINEAR FEEDFORWARD EQUALIZATION COEFFICIENTS $a(n)$ WITH ADAPTATION TO THE TRELLIS ERROR SIGNAL -555

UPDATE CORRELATED NOISE REDUCTION COEFFICIENTS $c(n)$ WITH ADAPTATION TO THE TRELLIS ERROR SIGNAL AND WITH INPUT OF A TENTATIVE ERROR SIGNAL, THE TENTATIVE ERROR SIGNAL FORMED AS A DIFFERENCE BETWEEN A TENTATIVE SYMBOL DECISION ($\hat{d}'(n-m_2)$) AND THE RECEIVED DATA SIGNAL SUBSEQUENT TO EQUALIZATION (AND FILTERING). -560

NO / COMMUNICATION SESSION COMPLETED? / YES -565

RETURN -570

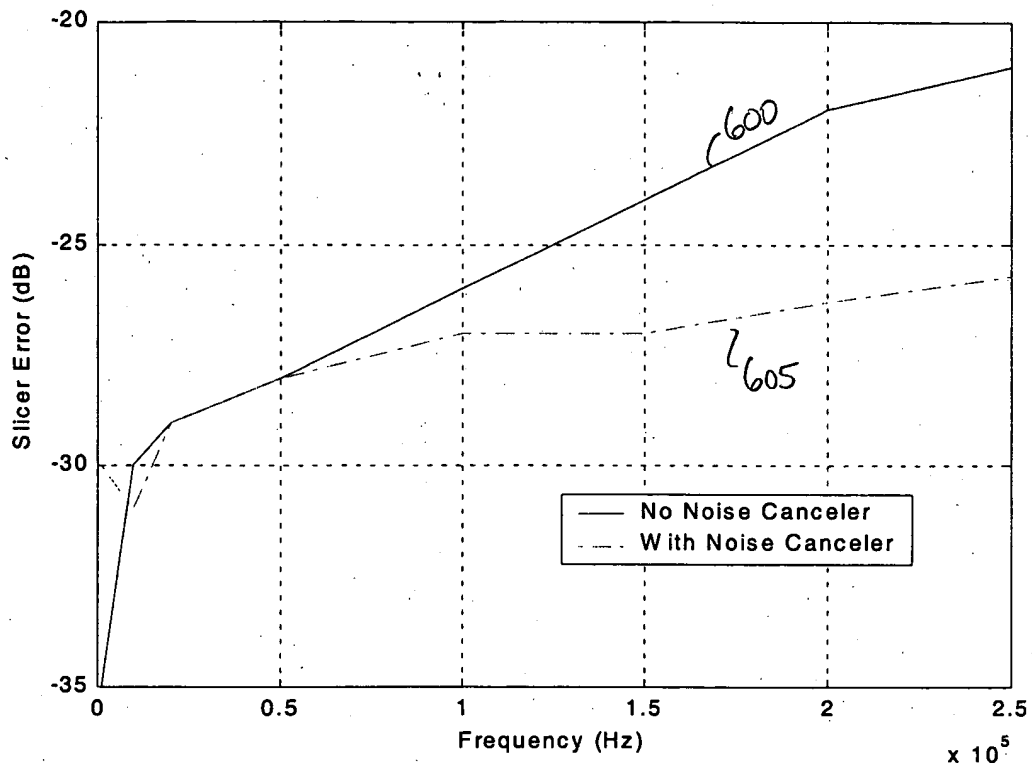


Figure 10

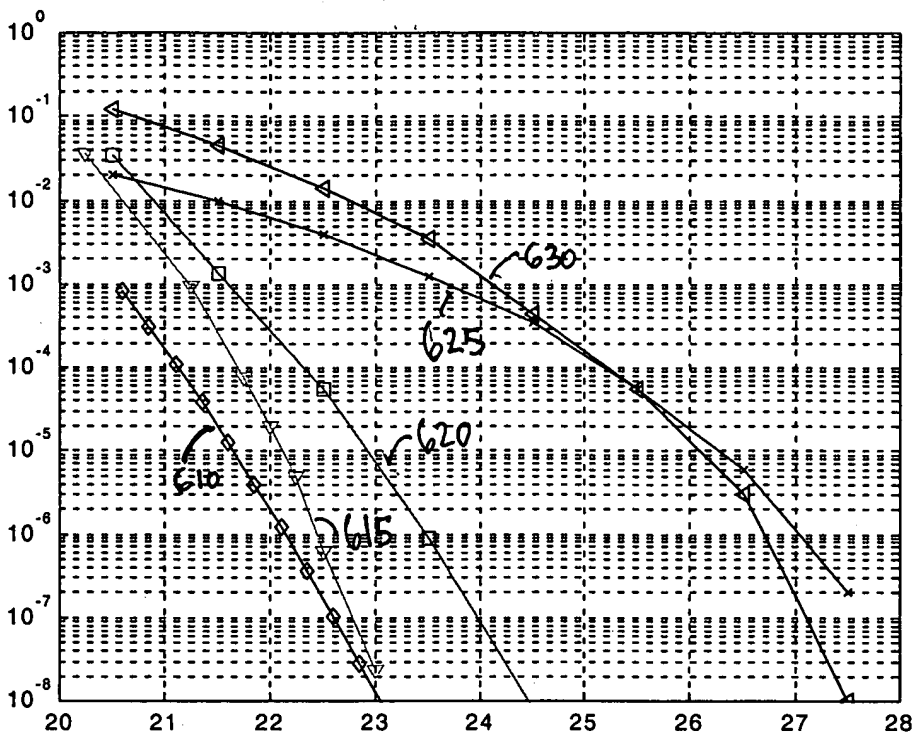


Figure 11

720 735

Crosstalk Environment	Correlation Canceller Improved Performance Margin(dB)
700 24T1+24 HDSL2 (C)	1.4
705 39 HDSL2 (C)	1.5
710 24 ADSL+24 HDSL(C)	1.8
715 24 T1+24 HDSL2 (R)	1.4

Figure 12